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Amendment to the Claims

Claims 1 – 29. (Canceled)

30. (Currently amended): A method for producing an end-product comprising the steps of, a) contacting a cellulose containing substrate comprising plant residues and at least one substrate-converting enzyme to produce an intermediate ~~comprising selected from the group of pentoses and hexoses glucose~~, wherein said substrate-converting enzyme is selected from the group consisting of alpha amylases, glucoamylases, pullulanases, cellulases, and combinations thereof; and b) in the same reaction vessel contacting said intermediate with a microorganism that comprises an intermediate-converting microbial enzyme, wherein said intermediate is substantially all bioconverted by said intermediate-converting microbial enzyme to said end-product.

31. (Previously presented): The method according to Claim 30, wherein the cellulose containing substrate is obtained from corn or wheat plant material.

32. (Previously presented): The method according to Claim 30, wherein the glucoamylase is a granular starch hydrolyzing glucoamylase enzyme.

33. (Previously presented): The method according to Claim 32, wherein the granular starch hydrolyzing glucoamylase enzyme is derived from a strain of *Humicola* or *Rhizopus*.

34. (Previously presented): The method according to Claim 30, wherein the alpha amylase is derived from a bacterial source.

35. (Previously presented): The method according to Claim 30, wherein said intermediate-converting microbial enzyme is secreted by a microorganism in contact with said intermediate.

36. (Previously presented): The method according to Claim 35, wherein said microorganism is a bacterium.

37. (Previously presented): The method according to Claim 30, wherein said intermediate is maintained at a concentration level below that which triggers catabolite repression effects upon the conversion of said intermediate to said end-product.

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38. (Previously presented): The method according to Claim 30, wherein the intermediate is maintained at a concentration level below that which triggers enzymatic inhibition effects upon the conversion of said intermediate to said end-product.

39. (Previously presented): The method according to Claim 30, wherein the presence of said end-product does not inhibit the further production of said end-product.

40. (Previously presented): The method according to Claim 30, wherein the presence of the cellulose containing substrate does not inhibit the further production of said end-product.

41. (Cancelled)

42. (Previously presented): The method of Claim 30, wherein said end-product is selected from the group consisting of 1,3-propanediol, glycerol, succinic acid, lactic acid, 2,5-diketo-D-gluconic acid or, gluconate, glucose, alcohol, and ascorbic acid intermediates.

Claims 43 – 50. (Cancelled)

51. (Previously presented): The method according to claim 30, wherein the at least one substrate-converting enzyme is a cellulase, the intermediate comprises glucose; and the microorganism comprising an intermediate-converting enzyme is a bacteria.

52. (Previously presented): The method according to claim 30, wherein the substrate-converting enzyme is provided in a cell free extract.

53. (Previously presented): The method according to claim 30, wherein the at least one substrate converting enzyme is a cellulase.

54. (Previously presented): The method according to claim 30, wherein the method is carried out at a pH of 5.0 to 9.0.

55. (Previously presented): The method according to claim 30, wherein the end-product is glycerol or 1,3-propanediol.

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56. (Previously presented): The method according to claim 30, wherein the end-product is an ascorbic acid intermediate.

57. (Previously presented): The method according to claim 30, wherein the end-product is lactic acid.

58. (Previously presented): The method according to claim 30, further comprising recovering the end-product.

59. (Previously presented): The method according to claim 30, wherein the substrate is a lignocellulose material.

60. (Previously presented): The method according to claim 30, wherein the presence of said end-product does not inhibit the further production of said end-product.

61. (New): The method according to claim 51, wherein the end-product is 1,3-propanediol.

62. (New): The method according to claim 61 further comprising contacting the cellulose containing substrate with an alpha amylase.

63. (New): The method according to claim 61 further comprising contacting the cellulose containing substrate with a glucoamylase.

64. (New): The method according to claim 61, wherein the plant residue is obtained from corn, wheat, rice, barley or combinations thereof.

65. (New): The method according to claim 61, wherein the plant residue is obtained from cassava, sugarcane, sugar beet or combinations thereof.

66. (New): The method according to claim 61 further comprising recovering the end-product.

67. (New): The method according to claim 51, wherein the bacteria is an *E. coli* strain.

68. (New): The method according to claim 51, wherein the bacteria is a recombinant strain.

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69. (New): The method according to claim 51, wherein the contacting is for 48 to 120 hours.